UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/597,906	05/08/2007	Alessandro Boer	71354-0449	7759

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EXAMINER
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ART UNIT	PAPER NUMBER
4136	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

PTOL-90A (Rev. 04/07)

	Application No.	Applicant(s)
	10/597,906	BOER ET AL.
Office Action Summary	Examiner	Art Unit	
	PAOLO GONZALEZ	4136	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>10/06/2006</u>.
2a)☐ This action is **FINAL**.　　　2b)☒ This action is non-final.
3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>19-40</u> is/are pending in the application.
　　4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5)☐ Claim(s) _____ is/are allowed.
6)☒ Claim(s) <u>19-40</u> is/are rejected.
7)☐ Claim(s) _____ is/are objected to.
8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.
10)☒ The drawing(s) filed on <u>11 August 2006</u> is/are: a)☐ accepted or b)☒ objected to by the Examiner.
　　Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
　　Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
　　a)☒ All　b)☐ Some * c)☐ None of:
　　　1.☐ Certified copies of the priority documents have been received.
　　　2.☐ Certified copies of the priority documents have been received in Application No. _____.
　　　3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
　　* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)
2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3)☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4)☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
5)☐ Notice of Informal Patent Application
6)☐ Other: _____.

U.S. Patent and Trademark Office
PTOL-326 (Rev. 08-06)　　　　　　　　　**Office Action Summary**　　　　　　　　Part of Paper No./Mail Date 20090623

DETAILED ACTION

Response to Preliminary Amendment

1.   Preliminary amendment file on 08/11/2006 has been entered in the application. In
addition, it is noted by the examiner that the preliminary amendment file on 08/11/2006 on the
"REMARKS" section of the preliminary amendment the applicant addresses the amendment of
the specification and the amendment of the claims 5, 6, 7, and 10. However, applicant does not
address the addition of new claims 13-18 in his remarks.

2.   2nd Preliminary amendment file on 10/06/2006 has been entered in the application. It is
noted by examiner that claims 1-18 have been canceled and the newly claims 19-40 are pending.

Information Disclosure Statement

3.   The information disclosure statement filed 08/11/2006 fails to comply with 37 CFR
1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent
literature publication or that portion which caused it to be listed; and all other information or that
portion which caused it to be listed. Moreover, information disclosure statement filed 08/11/2006
fails to comply with 37 CFR 1.98(a)(3) because it does not include a concise explanation of the
relevance, as it is presently understood by the individual designated in 37 CFR 1.56(c) most
knowledgeable about the content of the information, of each patent listed that is not in the
English language. It has been placed in the application file, but the information referred to
therein has not been considered.

4.   The information disclosure statement filed 01/24/2008 fails to comply with 37 CFR

1.98(a)(3) because it does not include a concise explanation of the relevance, as it is presently

understood by the individual designated in 37 CFR 1.56(c) most knowledgeable about the

content of the information, of each patent listed that is not in the English language. The

information disclosure statement was considered by the examiner, nevertheless, the applicant is

reminded to comply with 37 CFR 1.98(a)(2) when submitting an information disclosure

statement.

Drawings

5.   The drawings are objected to under 37 CFR 1.83(a). The drawings must show every

feature of the invention specified in the claims. Therefore, the "cooling chamber",

"compressor", "temperature sensor", and "controller" must be shown or the feature(s) canceled

from the claim(s). No new matter should be entered.

        Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to

the Office action to avoid abandonment of the application. Any amended replacement drawing

sheet should include all of the figures appearing on the immediate prior version of the sheet,

even if only one figure is being amended. The figure or figure number of an amended drawing

should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure

must be removed from the replacement sheet, and where necessary, the remaining figures must

be renumbered and appropriate changes made to the brief description of the several views of the

drawings for consistency. Additional replacement sheets may be necessary to show the

renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet"

pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will

be notified and informed of any required corrective action in the next Office action. The

objection to the drawings will not be held in abeyance.

Specification

6.   The disclosure is objected to because of the following informality: the layout of the

specification.

        The following guidelines illustrate the preferred layout for the specification of a utility
application. These guidelines are suggested for the applicant's use.

Arrangement of the Specification

        As provided in 37 CFR 1.77(b), the specification of a utility application should include
the following sections in order. Each of the lettered items should appear in upper case, without
underlining or bold type, as a section heading. If no text follows the section heading, the phrase
"Not Applicable" should follow the section heading:

        (a) TITLE OF THE INVENTION.
        (b) CROSS-REFERENCE TO RELATED APPLICATIONS.
        (c) STATEMENT REGARDING FEDERALLY SPONSORED RESEARCH OR
            DEVELOPMENT.
        (d) THE NAMES OF THE PARTIES TO A JOINT RESEARCH AGREEMENT.
        (e) INCORPORATION-BY-REFERENCE OF MATERIAL SUBMITTED ON A
            COMPACT DISC.
        (f) BACKGROUND OF THE INVENTION.
            (1) Field of the Invention.
            (2) Description of Related Art including information disclosed under 37 CFR 1.97
            and 1.98.
        (g) BRIEF SUMMARY OF THE INVENTION.
        (h) BRIEF DESCRIPTION OF THE SEVERAL VIEWS OF THE DRAWING(S).
        (i) DETAILED DESCRIPTION OF THE INVENTION.
        (j) CLAIM OR CLAIMS (commencing on a separate sheet).
        (k) ABSTRACT OF THE DISCLOSURE (commencing on a separate sheet).
        (l) SEQUENCE LISTING (See MEP § 2424 and 37 CFR 1.821-1.825. A "Sequence
            Listing" is required on paper if the application discloses a nucleotide or amino

acid sequence as defined in 37 CFR 1.821(a) and if the required "Sequence Listing" is not submitted as an electronic document on compact disc).

Appropriate correction is required.

Claim Rejections - 35 USC § 112

7.   The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8.   Claims 26 and 38 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite

for failing to particularly point out and distinctly claim the subject matter which applicant

regards as the invention.

Claims 26 and 27 recite a preamble of "a method according to claim 21" on line 1 of

claims, but, since claim 21 is directed to a refrigerator and not a method, thus it is unclear what

method/process applicant is intending to encompass. It is noted by the examiner for purposes of

furthering prosecution of the application that claims 26 and 27 depend of claim 23. Claims 28-38

are rejected for incorporating the above error from their respective parent claims by dependency.

Claim Rejections - 35 USC § 102

9.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

10.   Claims 19-35 are rejected under 35 U.S.C. 102(b) as being anticipated by JP 05-272854

A (Machine translation).

Regarding claim 19, figure 1 to figure 9 of Machine translation discloses a refrigerator (1) comprising: a cooling chamber (46) for cooling a food item placed therein; and a compressor (55) having an adjustable cooling capacity (paragraph [0020]; paragraph [0022], paragraph [0027] to [0028]; paragraph [0035] to [0036]; and paragraph [0049]see paragraph [0020]); a temperature sensor (53 and 54) providing a signal representative of the temperature of the cooling chamber (see paragraph [0019]); and a controller (60) operably coupled to the compressor (55) and temperature sensor (53 and 54) to receive the signal to determine a variation of the temperature over time and adjust the cooling capacity of the compressor (55) in response to the variation of the temperature in the cooling chamber (46) (see paragraph [0021] to paragraph [0022]; and paragraph [0035] to [0036]).

Regarding claim 20, Machine translation discloses a refrigerator (1) according to claim 19, wherein the controller (60) determines the load of the food items in the cooling chamber (46) from the temperature variation (see figure 1-9; see abstract; paragraph [0001]; paragraph [0021] to [0022]; paragraph [0029] to [0033]).

Regarding claim 21, Machine translation discloses a refrigerator (1) according to claim 20, wherein the controller (60) determines the load by estimating an enthalpy of the food items in the cooling chamber (46) (see figures 1-9; see abstract; paragraph [0001]; paragraph [0021] to [0022]; paragraph [0029] to [0033]; paragraph [0046] and paragraph [0049]).

Regarding claim 22, Machine translation discloses a refrigerator (1) according to claim 19, wherein the controller (60) adjusts the cooling capacity by adjusting at least one of the speed and run time of the compressor (see figures 1-9; paragraph [0020]; paragraph [0022], paragraph [0027] to [0028]; paragraph [0035] to [0036]; and paragraph [0049]).

Regarding claim 23, figure 1-9 of Machine translation discloses a method for controlling

a cooling capacity of a compressor (55) in a refrigerator (1) having a cooling compartment (46),

comprising: determining a variation in the temperature of the cooling compartment (46) in

response to an increased enthalpy at least one food item in the cooling compartment (46) (see

paragraph [0021] to paragraph [0023]; and paragraph [0029] to [0033]); and

adjusting the cooling capacity of the compressor in response to the determined variation in the

temperature to increase the rate of cooling as compared to a rate of cooling without an increase

in enthalpy (paragraph [0020]; paragraph [0022], paragraph [0027] to [0028]; paragraph [0035]

to [0036]; and paragraph [0049].

Regarding claim 24, Machine translation discloses a method according to claim 23

wherein the adjusting of the cooling capacity is in proportion to the determined temperature

variation (see figures 5-9; paragraph [0021] to [0028]; paragraph [0035] to [0036]; the cooling

capacity of the quick freezing room 46 is performed based on the detection temperature of the

quenching room temperature sensor 53 and the load temperature sensor 54, thus it is noted by the

examiner that the cooling capacity is in proportion with the determine temperature variation).

Regarding claim 25, Machine translation discloses a method according to claim 24

wherein the determined temperature variation comprises comparing a sensed temperature of the

cooling compartment to a reference temperature (see figures 1-9; paragraph [0021] to paragraph

[0025]; and paragraph [0035] to [0036]; paragraph [0045] to [0046]).

Regarding claim 26, Machine translation discloses a method according claim 21,

wherein the increased enthalpy is attributable to the placement of a food item inside the

refrigerator (see abstract; see figures 5-9; see abstract; paragraph [0001]; paragraph [0006];

paragraph [0022]; paragraph [0029] to [0033]; paragraph [0046] and paragraph [0049]).

Regarding claim 27, Machine translation discloses a method according to claim 21,

wherein the adjusting the cooling capacity comprises analyzing a shape factor of the determined

temperature variation, wherein such shape factor is selected from the group consisting of

derivatives, area, peak, overshoot duration, and power spectrum (see figures 7-8; see paragraphs

[0034] to [0044]).

Regarding claim 28, Machine translation discloses a method according to claim 27,

wherein the adjusting of the cooling capacity further comprises estimating the enthalpy of the

food from an analysis of at least one of the shape factors (see figures 7-8; see paragraphs [0034]

to [0044]).

Regarding claim 29, Machine translation discloses a method according to claim 28,

wherein adjusting the cooling capacity comprises adjusting at least one of the speed and run time

of the so that at least one of the integral and the peak of the determined temperation variation is

below a reference temperature (see figures 7-8; see paragraph [0034] to [0044]).

Regarding claim 30, Machine translation discloses a method according to claim 29

wherein the reference temperature is an average temperature (see paragraph [0038] to [0043]).

Regarding claim 31, Machine translation discloses a method according to claim 28

wherein the adjusting of the cooling capacity is proportional to the estimated enthalpy (see

figures 1-9; see abstract; paragraph [0001]; paragraph [0022]; paragraph [0029] to [0033];

paragraph [0046] and paragraph [0049]).

Regarding claim 32, Machine translation discloses a method according to claim 27, wherein the determining the temperature variation comprises sensing the temperature in the cooling compartment (46) and comparing the sensed temperature to a reference value (see figures 1-9; paragraph [0021] to paragraph [0025]; and paragraph [0035] to [0036]; paragraph [0045] to [0046]).

Regarding claim 33, Machine translation discloses a method according to claim 32, wherein the comparison determines when the sensed temperature is above the reference value (see figures 5-9; paragraphs [0025] to [0033] and paragraphs [0037] to [0043]).

Regarding claim 34, Machine translation discloses a method according to claim 33, and further comprising estimating an enthalpy of a food item placed in the refrigerator from at least the overshoot shape of the sensed temperature (see figure 7-8; see paragraph [0034] to [0044]) , and increasing the cooling capacity of the variable capacity compressor so that at least one of an integral and a peak of the temperature variation below the reference value is proportional to the estimated enthalpy (see figures 5-9; see paragraph [0029] to [0044]).

Regarding claim 35, Machine translation discloses a method according to claim 33, and further comprising processing shape factors such as areas and derivatives of the temperature sensor output signals using soft computing techniques such as fuzzy logic and neural networks to provide an estimated enthalpy of a food item and to adapt the compressor response thereto (see figures 5-9; see paragraph [0029] to [0044]).

11.   Claims 23, 39-40 are rejected under 35 U.S.C. 102(b) as being anticipated by Fung (US Pat. 5,586,444).

Regarding claim 23, figure 1-9 of Fung discloses a method for controlling a cooling

capacity of a compressor (30, 32, 34, and 36) in a refrigerator (10) having a cooling compartment

(12, 14, 16, and 18), comprising: determining a variation in the temperature of the cooling

compartment (12, 14, 16, and 18) in response to an increased enthalpy at least one food item in

the cooling compartment (12, 14, 16, and 18); and adjusting the cooling capacity of the

compressor (30, 32, 34, and 36) in response to the determined variation in the temperature to

increase the rate of cooling as compared to a rate of cooling without an increase in enthalpy (see

abstract; see figure 1-9; column 1, line 48 to column 2, line 29; column 3, lines 1-46; column 4,

line 48 to column 5, line 6; column 6, lines 6-14 and lines 19-36; column 7, line 43 to column 8,

line 19)

Regarding claim 39, Fung discloses a method according to claim 23, and further

comprising adjusting the cooling capacity of the compressor (30, 32, 34, and 36) pursuant to the

application of a control algorithm based on a proportional-derivative-integral technique (142)

according to the formula

$$u(t) = Kp * [e(t) + \frac{1}{Ti} * \int_0^t e(t)\, dt + Td * \frac{de(t)}{dt}]$$

Wherein

u(t) = compressor cooling capacity request (NEWSPEED);

Kp = preselected coefficient (KP),

e(t) = temperature error = Tprobe-Ttarget, (DDELTA = (PDELTA − PDELTA)/sample time =

rate of change of the error signal between the suction pressure and the target pressure)

Ti = integral time (Ki),

Td = derivative time (SAMPLE_TIME),

T*target* = temperature reference depending on user set temperature.

(see abstract, see figure 1-9; column 6, lines 6-14 and lines 19-36; column 7, line 43 to column

10, line 37; Fung uses the pressure parameter in the PID, yet it anticipates in column 4, line 48 to

column 5, line 6 that the parameter may be the temperature inside the refrigeration system, thus

is anticipated that instead of the pressure the temperature is incorporated into the PID technique

in order to adjust the cooling capacity of the compressor based on the temperature parameter).

      Regarding claim 40, Fung discloses a method according to claim 39, and further

comprising adjusting the parameters Ti, Td, and Kp according to one of opening the refrigerator

door and detecting a sudden rise in temperature in order to speed up a cooling time (see abstract;

see figure 1-9; column 1, line 48 to column 2, line 29; column 4, line 48 to column 5, line 6;

column 6, lines 6-14 and lines 19-36; column 8, line 12 to column 10, line 37; Fung discloses

that is well know in the art that adjusting parameters to speed up a cooling time when

refrigeration load is influenced when the refrigerator system doors are open or when placing

items inside the refrigerator system, as disclosed in column 1, lines 23-35).

Claim Rejections - 35 USC § 103

12.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

13.   This application currently names joint inventors. In considering patentability of the

claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various

claims was commonly owned at the time any inventions covered therein were made absent any

evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out

the inventor and invention dates of each claim that was not commonly owned at the time a later

invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c)

and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

14.   Claims 36-38 are rejected under 35 U.S.C. 103(a) as being unpatentable over JP 05-

272854 A (Machine translation) as applied to claims 19-35 above, and further in view of Fung

(US Pat. 5,586,444).

Regarding claim 36, Machine translation discloses a method according to claim 33,

adjusting the speed of a compressor according to an estimated enthalpy (see figures 5-9; see

paragraph [0029] to [0044]). However, Machine translation does not explicitly discloses the step

of switching a compressor to one of on and off when a temperature inside the refrigerator reaches

one of a nominal cut-on temperature and cut-off temperature, respectively, so that that such cut-

on temperature and cut-off temperature are adjusted according to an estimated enthalpy and are

progressively readjusted to the nominal values in order to provide an energy efficient cooling.

Nevertheless, Fung discloses the step of switching a compressor to one of on and off when a

temperature inside the refrigerator reaches one of a nominal cut-on temperature and cut-off

temperature, respectively, so that that such cut- on temperature and cut-off temperature are

adjusted according to an estimated enthalpy and are progressively readjusted to the nominal

values in order to provide an energy efficient cooling (see abstract; see figure 1-9; column 3,

lines 1-46; column 4, line 48 to column 5, line 6; column 6, lines 6-14 and lines 19-36; column 7, line 43 to column 8, line 19). It would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify the method disclosed by Machine translation with the step of switching a compressor to one of on and off when a temperature inside the refrigerator reaches one of a nominal cut-on temperature and cut-off temperature, respectively, so that that such cut- on temperature and cut-off temperature are adjusted according to an estimated enthalpy and are progressively readjusted to the nominal values in order to provide an energy efficient cooling as taught by Fung as both Machine translation and Fung are directed to the method of controlling/adjusting the cooling capacity of a compressor accordingly to an estimated enthalpy of a food item inside a refrigeration system, since it is well know in the art at the time of the invention that the design/construction of controllers are alter in order to met specific design criteria.

Regarding claim 37 and 38, Machine translation discloses a method according to claim 33, wherein the cooling capacity of the variable capacity compressor is increase so that at least one of the integral and a peak value of the temperature variation is proportional to the estimated enthalpy (see figures 5-9; see paragraph [0029] to [0044]). However, Machine translation does not explicitly disclose further comprising the step of determining an integral of the temperature variation above the reference value and increasing the cooling capacity of the variable capacity compressor so that at least one of the integral and a peak value of the temperature variation is proportional to integral nor the step of determining a derivative of a decrease in the sensed temperature below the reference value and increasing the cooling capacity of the variable capacity compressor so that at least one of the derivative and the peak of the temperature

variation is inversely proportional to the estimated derivative. Fung discloses a the use of a

"PID" proportional-integral-differential (PID) controller to adjust the cooling capacity of the

refrigeration system based on enthalpy of food being placed inside the system comprising the

steps not taught by Machine translation (see abstract, see figure 1-9; column 6, lines 6-14 and

lines 19-36; column 7, line 43 to column 10, line 37; claims 1-9). It would have been obvious to

one of ordinary skill in the art at the time the invention was made to modify the controller

disclosed by Machine translation with the controller taught by Fung as both Machine translation

and Fung are directed to the method of controlling/adjusting the cooling capacity of a

compressor accordingly to an estimated enthalpy of a food item inside a refrigeration system,

since it is well know in the art at the time of the invention that the design/construction of

controllers are alter in order to met specific design criteria.

Conclusion

15.   The prior art made of record and not relied upon is considered pertinent to applicant's

disclosure.

        JP 06-003021 A (Machine translation) discloses a method to perform freezing

preservation by operating a compressor and a blower during quick-freezing operation to

introduce cold air in a quick-freezing chamber. This operation is performed using a control

means based on an output from the temperature detecting means in a freezing chamber. Thus, the

method wherein the freezing final temperature of a food is lowered according to the size and the

initial temperature of a food, in a refrigerator having a quick-freezing chamber to perform quick-

freezing of a food.

JP 04-263771 A (Machine translation of Patent Abstract of Japan) discloses a refrigerator comprising a 1st temperature sensor which detects a temperature in a quick freezer compartment, a 2nd temperature sensor which detects a temperature of materials to be stored, and a timer deice which estimates a temperature fall time of the materials during the first operation mode in which a compressor and a blower are forcedly operated while a refrigerant control device is open. A control means decides an operation time of a second operation mode which the refrigerant control device is close according to the detected temperature and fall time and stops the blower, and the second operation mode is perform for a decided time after the first operation mode. Thus, the refrigerator detects thermal capacity, such as the extent of load of materials to be stored in a quick freezer compartment, and to vary a quick cooling time according to the detected load extent.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to **PAOLO GONZALEZ** whose telephone number is (571)270-1490. The examiner can normally be reached on Monday - Friday, 9:30am-3:00pm, alternating Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marvin M. Lateef can be reached on (571)270-1493. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would

like assistance from a USPTO Customer Service Representative or access to the automated

information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/PAOLO GONZALEZ/   /Marvin M. Lateef/
Examiner, Art Unit 4136   Supervisory Patent Examiner, Art Unit 4136
06/24/2009